

**Amendments to the Claims:**

This Listing of Claims Replaces all prior Versions and Listings of the Claims in the Application.

**Listing of the Claims:**

1. (Currently amended) A machining device for machining a surface of a workpiece comprising:

a) a tool at least partially formed from an abrasive material having an open cell porous structure, the tool including a rotational axis and an outer surface disposed about the rotational axis, the outer surface including a workpiece interface adapted to interface with and machine a surface of a workpiece; and

b) a fluid delivery system for delivering fluid to the workpiece interface, the fluid delivery system being stationary and operative to disperse fluid to contact the tool primarily at a location inboard from the outer surface and to deliver the fluid into the tool for transmission into and through substantially the entire open cell porous structure of the tool to the workpiece interface.

2. (Withdrawn) The machining device of claim 1, wherein the fluid delivery system further comprises a deflection member to assist in directing fluid to the contact location.

3. (Withdrawn) The machining device of claim 1, wherein the tool defines a cavity with an interior surface and wherein the contact location is on the interior surface.

4. (Withdrawn) The machining device of claim 1, wherein the fluid delivery system includes an attachment member adapted for fluid connection to a spindle of a machining center.

5. (Withdrawn) The machining device of claim 1, wherein the fluid delivery

system is oriented relative to the tool to disperse fluid primarily in a dispersion direction from the rotational axis to the outer surface of the tool.

6. (Previously presented) The machining device of claim 1, wherein fluid delivery system is oriented relative to the tool to disperse fluid primarily in a dispersion direction that is substantially parallel to the rotational axis.

7. (Previously presented) The machining device of claim 1, wherein the fluid delivery system comprises a first outlet and a second outlet.

8. (Previously presented) The machining device of claim 7, wherein the tool comprises a first side and a second side, wherein the first outlet is oriented relative to the tool to disperse fluid to primarily contact the first side and enter the open cell porous cell structure from the first side and wherein the second outlet is oriented relative to the tool to disperse fluid to primarily contact the second side and enter the open cell porous cell structure from the second side.

9. (Previously presented) The machining device of claim 1, wherein the fluid delivery system includes an outlet that is located inboard from the outer surface of the tool.

10. (Withdrawn) The machining device of claim 9, wherein the outlet is located in a cavity defined in the tool.

11. (Previously presented and withdrawn) The machining device of claim 1, wherein a portion of the tool adjacent the outer surface is adapted to inhibit fluid flow to assist in providing a controlled radial discharge of the fluid from the open cell porous structure at a workpiece surface in use.

12. (Previously presented) The machining device of claim 1, wherein the

tool comprises a hub and a working member at least partially defining the outer surface.

13. (Withdrawn) The machining device of claim 12, wherein the hub includes a support member and an outer member defining a hub peripheral surface, wherein the working member is adjacent the hub peripheral surface.

14. (Withdrawn) The machining device of claim 13, wherein the outer member is at least partially impermeable to fluid and comprises a plurality of apertures adapted to permit fluid to pass through the outer member.

15. (Withdrawn) The machining device of claim 13, wherein the support member and the outer member define a cavity, wherein the contact location is on an interior surface of the cavity.

16. (Withdrawn) The machining device of claim 15, wherein the fluid delivery system includes an outlet located in the cavity.

17. (Currently amended and withdrawn) The machining device of claim ~~12~~ 13, wherein the working member is attached to the hub peripheral surface.

18. (Withdrawn) The machining device of claim 17, wherein the working member is attached to the hub peripheral surface with an adhesive layer.

19. (Withdrawn) The machining device of claim 18, wherein the adhesive layer is not a continuous layer.

20. (Previously presented) The machining device of claim 1, wherein the fluid delivery system is adapted to compensate for changes in material characteristics of the tool in order to assist in maintaining proper dispersal of fluid from the open cell porous structure at a machining zone.

21. (Previously presented) The machining device of claim 1, wherein the

contact location is predetermined to assist in providing a controlled radial discharge of fluid from the open cell porous structure at a workpiece surface in use.

22. (Currently amended) A method of machining a workpiece comprising the steps of:

- a) providing a workpiece;
- b) providing a tool at least partially formed from an abrasive material having an open cell porous structure, the tool including a rotational axis and an outer surface disposed about the rotational axis, the outer surface including a workpiece interface;
- c) providing a stationary fluid delivery system;
- d) dispersing fluid from the fluid delivery system such that the fluid is delivered into substantially the entire open cell porous structure of the tool after contacting the tool primarily at a contact location inboard from the outer surface of the tool;
- e) rotating the tool about the rotational axis such that fluid is transmitted through substantially the entire open cell porous structure of the tool to the workpiece interface; and
- f) machining the workpiece with the workpiece interface of the tool at a machining zone.

23. (Previously presented) The method of claim 22, wherein the fluid delivery system comprises a fluid lubrication device.

24. (Previously presented) The method of claim 22, wherein the contact location is in an area advance of the machining zone.

25. (Canceled)

26. (Currently amended) The method of claim ~~25~~ 22, wherein the rotation of the

tool facilitates in transmission of the fluid through the open cell porous structure of the tool.

27. (Previously presented) A method of machining a workpiece comprising the steps of:

- a) providing a workpiece;
- b) providing a tool at least partially formed from an abrasive material having an open cell porous structure, the tool including a rotational axis and an outer peripheral surface disposed about the rotational axis;
- c) providing a fluid delivery device;
- d) dispersing fluid from the fluid delivery device such that the fluid contacts the tool primarily at a contact location inboard from the outer peripheral surface of the tool and is delivered into the open cell porous structure of the tool;
- e) rotating the tool about the rotational axis such that fluid flows through the open cell porous structure;
- f) machining the workpiece with the outer peripheral surface of the tool at a machining zone, wherein a controlled radial discharge of fluid from the open cell porous structure is provided at the machining zone; and
- g) modifying parameters of the fluid delivery device to compensate for changes in material characteristics of the tool in order to assist in maintaining proper dispersal of fluid from the open cell porous structure at the machining zone.

28. (Previously presented) The machining device of claim 1, wherein the outer surface of the tool comprises an outer peripheral surface of the tool.

29. (Previously presented) The machining device of claim 1, wherein the

fluid delivery system is operative to deliver the fluid into the open cell porous structure tool for radial transmission through the open cell porous structure of the tool to the workpiece interface.

30. (Previously presented) The method of claim 22, wherein the step of rotating the tool facilitates radial transmission of the fluid through the open cell porous structure of the tool to the workpiece interface.

31. (Previously presented) The method of claim 22, further comprising the step of modifying parameters of the fluid delivery system to compensate for changes in material characteristics of the tool in order to assist in maintaining proper dispersal of fluid from the open cell porous structure at the machining zone.

32. (New) The machining device of claim 1, wherein the abrasive material comprises a superabrasive material.

33. (New) The machining device of claim 32, wherein the superabrasive material comprises cubic boron nitride, diamond or polycrystalline products.

34. (New) A machining device for machining a surface of a workpiece comprising:

a) a tool at least partially formed from an abrasive material having an open cell porous structure, the tool including a rotational axis and an outer surface disposed about the rotational axis, the outer surface including a workpiece interface adapted to interface with and machine a surface of a workpiece;

b) a fluid delivery system for delivering fluid to the workpiece interface, the fluid delivery system being operative to disperse fluid to contact the tool primarily at a location inboard from the outer surface and to deliver the fluid into the tool for transmission into and

**Serial No. 10/038,290**

**Amendment dated September 2, 2004**

**Reply to Office Action of March 2, 2004**

through substantially the entire open cell porous structure of the tool to the workpiece interface; and

- c) a deflection member to assist in directing fluid to the contact location.